

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants : Konrad GROB, et al
Assignee : Thermoquest Italia, S.p.A.
USSN : To be assigned
Filed : Concurrently herewith
For : METHOD AND DEVICE FOR
VAPORIZATION INJECTION
Art Unit: To be assigned
Examiner : To be assigned

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BOX PATENTS
Assistant Commissioner for Patents
US Patent & Trademark Office
Washington DC 20231

Dear Sir:

PRELIMINARY AMENDMENT

Prior to examination on the merits, please amend the above referenced Patent Application as follows:

MAILING CERTIFICATE

I hereby certify that this correspondence is being deposited with the United States Postal Service as **EXPRESS MAIL LABEL EL781391285US** in an envelope addressed to: BOX PATENT APPLICATIONS, NO FEE - Assistant Commissioner for Patents, Washington, DC 20231 on the date indicated below:

Lourdes Ramos
Name

Signature
July 3, 2001
Date

IN THE CLAIMS:

Pursuant to 37 CFR § 1.121(c)(1)(i), herein below are a set of clean claims containing all revisions made herein.

Amend claims 4-8, 10-11, 13-14 and 16 as follows:

4. A device according claim 1, characterized in that the internal channel of said needle has a diameter of less than 0.13 mm.
5. A device according to claim 1, in which the upper portion of said vaporization chamber is cooled or unheated.
6. A device according to claim 1, in which the external wall of said needle is covered by a thermal insulating material.
7. A device according to claim 1, in which said needle is completely formed in a thermal insulating polymer.
8. A device according to claim 1, in which the complete length of said vaporization chamber is greater than 10 cm.
10. A device according to claim 1, in which said vaporization chamber is coiled.

11. A device according to claim 1, in which said vaporization chamber is formed in metal.

13. A device according to claim 1, in which a conventional septum or a Merlin valve are able to be alternately mounted on the injector head.

14. A device according to claim 1, characterized in that said vaporization chamber has a restriction in its lower part containing said stop and vaporization means.

16. A device according to claim 1, characterized in that heating means for the vaporization chamber are provided operating at the vaporization temperature of the sample in correspondence to said restriction, and at a lower temperature in the upper part of the chamber.

R E M A R K S

| Claim | Status | Dependency |
|-------|----------------|-------------|
| 1 | Unchanged | Independent |
| 2 | Unchanged | 1 |
| 3 | Unchanged | 1 |
| 4 | Amended herein | 1 |
| 5 | Amended herein | 1 |
| 6 | Amended herein | 1 |

| Claim | Status | Dependency |
|-------|----------------|-------------|
| 7 | Amended herein | 1 |
| 8 | Amended herein | 1 |
| 9 | Unchanged | 8 |
| 10 | Amended herein | 1 |
| 11 | Amended herein | 1 |
| 12 | Unchanged | 11 |
| 13 | Amended herein | 1 |
| 14 | Amended herein | 1 |
| 15 | Unchanged | 14 |
| 16 | Amended herein | 1 |
| 17 | Unchanged | Independent |
| 18 | Unchanged | 17 |

Claims 4-8, 10-11, 13-14 and 16 have been amended to cancel multiple dependencies.

Respectfully submitted,

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MARKED-UP VERSION OF AMENDED CLAIMS
PURSUANT TO 37 CFR § 1.121(c)(1)(ii)

Amend claims 4-8, 10-11, 13-14 and 16 as follows:

4. A device according claim 1 [to one of the preceding claims], characterized in that the internal channel of said needle has a diameter of less than 0.13 mm.

5. A device according to claim 1, [3 or 4,] in which the upper portion of said vaporization chamber is cooled or unheated.

6. A device according to [one of the claims 1 to 5] claim 1, in which the external wall of said needle is covered by a thermal insulating material.

7. A device according to [one of the claims 1 to 5] claim 1, in which said needle is completely formed in a thermal insulating polymer.

8. A device according to [one of the claims 1 to 7] claim 1, in which the complete length of said vaporization chamber is greater than 10 cm.

10. A device according to [one of the previous claims] claim 1, in which said vaporization chamber is coiled.

11. A device according to [one of the previous claims] claim 1, in which said vaporization chamber is formed in metal.

13. A device according to [one of the preceding claims] claim 1, in which a conventional septum or a Merlin valve are able to be alternately mounted on the injector head.

14. A device according to [one or more of the preceding claims] claim 1, characterized in that said vaporization chamber has a restriction in its lower part containing said stop and vaporization means.

16. A device according to claim [13 or 15] 1, characterized in that heating means for the vaporization chamber are provided operating at the vaporization temperature of the sample in correspondence to said restriction, and at a lower temperature in the upper part of the chamber.